

REMARKS

I. Status of the Claims

No claims have been amended herein.

Claims 67, 69-76, 82-91, 96-102 and 104-119 are pending and subject to examination upon entry of this paper.

II. Information Disclosure Statement

Applicants hereby submit copies of the Office Actions listed in the SB/08 form filed November 18, 2009. Applicants request that the Office consider those references and initial Cite No. 24-32 in the SB-08 provided November 18, 2009, and attached herein for the Office's convenience.

III. Claim Rejections - 35 U.S.C. § 102

Claims 67, 69-76, 82-91, 96, 97, 101, 102, and 104-119 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,153,206 to Anton et al. (Anton). Office Action at pages 3-7. Specifically, the Office contends that Anton teaches a block polymer in the form "AAAAABBBBB", wherein AAB or ABB constitutes an intermediate random block. The Office further contends that "absent evidence to the contrary, the compositions being similar, if not the same, would necessarily have a percent transfer and polydispersity index which are similar, if not the same." Office Action at 3. Applicants respectfully disagree and traverse.

The instant claims recite, *inter alia*, a linear block polymer having "a polydispersity index of greater than or equal to 2.5". That linear block polymer comprises three blocks, namely, a first block, a second block, and an intermediate block that is a random block linking the first and second blocks.

Contrary to the Office's contention that polymers with similar compositions would have similar polydispersity index (PDI), PDI is based on the mechanism of polymerization and can be affected by a variety of reaction conditions. To be more specific, PDI is a structural attribute of a polymer and indeed, is a measure of variability. Notably, two polymers made of the same monomers can have different PDIs. The more heterogeneous the length of the polymer chains, the greater the PDI. As noted by the Office, Anton does not discuss polydispersity index. Instead, Anton describes that Group Transfer Polymerization (GTP) technique is used to prepare the polymers. See lines 63-65, col. 5, and lines 65-67, col. 11. GTP¹ is one of the main living polymerization techniques ² which are known to prepare polymers with polydispersity index close to 1. In contrast, the block polymers described in the subject application are prepared using free radical polymerization. As such, the polymers described in Anton are prepared via different processes from those disclosed in the subject application. Thus, even if an Anton polymer had the same monomer content as one of the block copolymers recited in the pending claims, those polymers would not necessarily have the same PDI, as a result of the use of the different processes. If they have different PDIs, the polymers are not structurally identical and they do not necessarily have the same properties.

Further, the high polydispersity of the linear block ethylenic polymer, as recited in the pending claims, has a direct effect on the properties of the resulting cosmetic

¹ <http://www.statemaster.com/encyclopedia/Living-polymerization>

² <http://www.statemaster.com/encyclopedia/Polydispersity-index>

composition. In an effort to expedite prosecution, a Declaration under 37 C.F.R. § 1.132 in which a polymer according to the disclosure and within the scope of claim 67 is compared to a polymer with a lower PDI is attached hereto. Despite similar monomer content, the polymer according to the disclosure exhibited less brittleness and viscosity than the comparative polymer. Applicants respectfully submit that those beneficial properties would not have been predictable to one of ordinary skill in the art because none of the cited references discloses such properties that are attributable to the PDI.

The Declaration shows that the polymer according to the disclosure differs from the comparison polymer. The lack of brittleness relative to the comparative polymer can render the polymer of the disclosure more suitable for use in cosmetic compositions, because the film formed by the polymer is less prone to cracking. Furthermore, that lack of brittleness is a result of the high PDI. That is, being composed of a linear block ethylenic polymer having a high PDI, the cosmetic composition comprises polymers that are more heterogeneous, i.e., some of the polymers are very long and others are substantially shorter. Applicants believe that it is those shorter polymers that contribute to the lack of brittleness in that they serve as plasticizers.

Without addressing the Office's other positions, and for the foregoing reasons, Applicants respectfully that this rejection be withdrawn.

IV. Claim Rejections - 35 U.S.C. § 103(a)

Claims 98-100 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Anton in view of U.S. Patent No. 5,681,877 to Hosotte-Filbert et al.(Hosotte-Filbert) for reasons as set forth at pages 8-10 of the Office Action. Applicants respectfully disagree and traverse for the following reasons.

As discussed above, Anton does not teach or suggest the polydispersity index as currently claimed. Neither does Anton teach or suggest that the intermediate block is random block. The Office relies on Hosotte-Filbert for the teaching of "a block co-polymer which comprises blocks of acrylic (or methacrylic) acid and methyl methacrylate". Hosotte-Filbert is further silent on polydispersity index, and does not teach or suggest that the segment linking the first and second blocks is a random block. As such, Hosotte-Filbert does not rectify Anton's deficiency.

Those two references, taken alone or in combination, do not render obvious the current claims as amended. Applicants respectfully request withdrawal of the rejections.

CONCLUSION


In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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By: 

Wen Li
Reg. No. 62,185

Tel: (650) 849-6649
Email: wen.li@finnegan.com